

Listing of Claims

1. (original) A substantially purified salivary *P. ariasi* polypeptide.

2. (currently amended) The polypeptide of claim 1, wherein the polypeptide comprises
a) an amino acid sequence at least 80% identical to an amino acid sequence set forth as
SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11,
SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, SEQ ID
NO:23, SEQ ID NO:25, SEQ ID NO:27, SEQ ID NO:29, SEQ ID NO:31, SEQ ID NO:33, SEQ
ID NO:35, SEQ ID NO:37, SEQ ID NO:39, SEQ ID NO:41, SEQ ID NO:43, SEQ ID NO:45, or
SEQ ID NO:47,

b) a conservative variant of the amino acid sequence set forth as ~~SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, SEQ ID NO:23, SEQ ID NO:25, SEQ ID NO:27, SEQ ID NO:29, SEQ ID NO:31, SEQ ID NO:33, SEQ ID NO:35, SEQ ID NO:37, SEQ ID NO:39, SEQ ID NO:41, SEQ ID NO:43, SEQ ID NO:45, or SEQ ID NO:47~~ in part (a),

c) an immunogenic fragment comprising at least fifteen consecutive amino acids of the
amino acid sequence set forth as ~~SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, SEQ ID NO:23, SEQ ID NO:25, SEQ ID NO:27, SEQ ID NO:29, SEQ ID NO:31, SEQ ID NO:33, SEQ ID NO:35, SEQ ID NO:37, SEQ ID NO:39, SEQ ID NO:41, SEQ ID NO:43, SEQ ID NO:45, or SEQ ID NO:47~~ in part (a), that specifically binds to an
antibody that specifically binds the amino acid sequence set forth as ~~SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, SEQ ID NO:23, SEQ ID NO:25, SEQ ID NO:27, SEQ ID NO:29, SEQ ID NO:31, SEQ ID NO:33, SEQ ID NO:35, SEQ ID NO:37, SEQ ID NO:39, SEQ ID NO:41, SEQ ID NO:43, SEQ ID NO:45, or SEQ ID NO:47~~ in part (a),
respectively; or

d) the amino acid sequence set forth as ~~SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, SEQ ID NO:23, SEQ ID NO:25, SEQ ID NO:27, SEQ ID NO:29, SEQ ID NO:31, SEQ ID NO:33, SEQ ID NO:35, SEQ ID NO:37, SEQ ID NO:39, SEQ~~

~~1. ID NO:41, SEQ ID NO:43, SEQ ID NO:45, or SEQ ID NO:47 in part (a), wherein administration of the polypeptide to a subject produces an immune response to *P. ariasi*.~~

3. (original) The *P. ariasi* polypeptide of claim 2, wherein the polypeptide comprises an amino acid sequence as set forth as SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, SEQ ID NO:23, SEQ ID NO:25, SEQ ID NO:27, SEQ ID NO:29, SEQ ID NO:31, SEQ ID NO:33, SEQ ID NO:35, SEQ ID NO:37, SEQ ID NO:39, SEQ ID NO:41, SEQ ID NO:43, SEQ ID NO:45, or SEQ ID NO:47, or a conservative variant thereof.

4. (original) The *P. ariasi* polypeptide of claim 3, wherein the polypeptide comprises an amino acid sequence set forth as SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, SEQ ID NO:23, SEQ ID NO:25, SEQ ID NO:27, SEQ ID NO:29, SEQ ID NO:31, SEQ ID NO:33, SEQ ID NO:35, SEQ ID NO:37, SEQ ID NO:39, SEQ ID NO:41, SEQ ID NO:43, SEQ ID NO:45, or SEQ ID NO:47.

5. (original) An antigenic fragment of the polypeptide of claim 4.

6. (original) The polypeptide of claim 1, wherein the polypeptide comprises an amino acid sequence at least 80% identical to an amino acid sequence set forth as SEQ ID NO:11, SEQ ID NO: 19, SEQ ID NO:35, or SEQ ID NO: 39.

7. (currently amended) The polypeptide of claim 1, wherein the polypeptide comprises an amino acid sequence at least 80% identical to [[a]] the amino acid sequence set forth as SEQ ID NO:1, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, SEQ ID NO:23, SEQ ID NO:25, SEQ ID NO:27, SEQ ID NO:33, SEQ ID NO:39, or SEQ ID NO: 45.

8. (original) An isolated nucleic acid encoding the polypeptide of claim 1.

9. (original) The nucleic acid of claim 8, wherein the nucleic acid comprises a sequence as set forth as SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:24, SEQ ID NO:26, SEQ ID NO:28, SEQ ID NO:30, SEQ ID NO:32, SEQ ID NO:34, SEQ ID NO:36, SEQ ID NO:38, SEQ ID NO:40, SEQ ID NO:42, SEQ ID NO:44, SEQ ID NO:46, or SEQ ID NO:48, or a degenerate variant thereof.

10. (original) The nucleic acid of claim 8, wherein the nucleic acid comprises a sequence as set forth as SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:24, SEQ ID NO:26, SEQ ID NO:28, SEQ ID NO:30, SEQ ID NO:32, SEQ ID NO:34, SEQ ID NO:36, SEQ ID NO:38, SEQ ID NO:40, SEQ ID NO:42, SEQ ID NO:44, SEQ ID NO:46, or SEQ ID NO:48.

11. (original) The nucleic acid of claim 8, wherein the nucleic acid encodes an amino acid sequence at least 80% identical to a the amino acid sequence set forth as SEQ ID NO:12, SEQ ID NO: 20, SEQ ID NO:36, or SEQ ID NO: 40.

12. (original) The nucleic acid of claim 8, wherein the nucleic acid encodes an amino acid sequence at least 80% identical to a the amino acid sequence set forth as SEQ ID NO:2, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:24, SEQ ID NO:26, SEQ ID NO:28, SEQ ID NO:34, SEQ ID NO:40, or SEQ ID NO: 46.

13. (original) The nucleic acid of claim 8, operably linked to an expression control sequence.

14. (original) The nucleic acid of claim 13, wherein the expression control sequence comprises a promoter.

15. (original) The nucleic acid of claim 14, wherein the promoter comprises an inducible or constitutive promoter.

16. (original) The nucleic acid of claim 15, wherein the promoter comprises a cytomegalovirus promoter.
17. (original) A vector comprising the nucleic acid of claim 8.
18. (original) The vector of claim 17, wherein the vector comprises a plasmid.
19. (original) The vector of claim 17, wherein the vector comprises a viral vector.
20. (original) A host cell transformed with the vector of claim 17.
- 21 - 24. (canceled)
25. (previously presented) A pharmaceutical composition comprising a therapeutically effective amount of the polypeptide of claim 1 and a pharmaceutically acceptable carrier.
26. (previously presented) A pharmaceutical composition comprising a therapeutically effective amount of the nucleic acid of claim 8 and a pharmaceutically acceptable carrier.
27. (currently amended) A method for inducing an immune response to a *P. ariasi* polypeptide in a subject, comprising
administering to the subject a therapeutically effective amount of the *P. ariasi* polypeptide of claim 1, or a polynucleotide encoding the *P. ariasi* polypeptide of claim 1,
thereby inducing the immune response.
28. (original) The method of claim 27, wherein the immune response comprises a T cell response.
29. (original) The method of claim 27, wherein the immune response comprises a B cell response.

30. (original) The method of claim 27, wherein the subject comprises a non-human veterinary subject.

31. (original) The method of claim 27, wherein the subject is a dog.

32. (previously presented) The method of claim 27, wherein the subject is a human.

33. (original) The method of claim 27, wherein the polypeptide comprises an amino acid sequence at least 80% identical to a the amino acid sequence set forth as SEQ ID NO:11, SEQ ID NO: 19, SEQ ID NO:35, or SEQ ID NO: 39.

34. (original) The method of claim 27, wherein the polypeptide comprises an amino acid sequence at least 80% identical to a the amino acid sequence set forth as SEQ ID NO:1, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, SEQ ID NO:23, SEQ ID NO:25, SEQ ID NO:27, SEQ ID NO:33, SEQ ID NO:39, or SEQ ID NO: 45.

35. (previously presented) A method for inhibiting a symptom of a *Leishmania* infection or preventing a *Leishmania* infection in a subject, comprising administering to the subject a therapeutically effective amount of the *P. ariasi* polypeptide of claim 1, or a polynucleotide encoding the *P. ariasi* polypeptide of claim 1, thereby inhibiting the symptom of the *Leishmania* infection or preventing the *Leishmania* infection.

36. (original) The method of claim 35, wherein the polypeptide comprises an amino acid sequence at least 80% identical to a the amino acid sequence set forth as SEQ ID NO:11, SEQ ID NO: 19, SEQ ID NO:35, or SEQ ID NO: 39.

37. (original) The method of claim 35, wherein the polypeptide comprises an amino acid sequence at least 80% identical to a the amino acid sequence set forth as SEQ ID NO:1, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, SEQ ID NO:23, SEQ ID NO:25, SEQ ID NO:27, SEQ ID NO:33, SEQ ID NO:39, or SEQ ID NO: 45.

38 - 76. (canceled)